translation no. 6. 05

DATE: July, 1968

## DDC AVAILABILITY NOTICE

Qualified requestors may obtain copies of this document from DDC.

This publication has been translated from the open literature and is available to the general public. Non-DOD agencies may purchase this publication from the Clearinghouse for Federal Scientific and Technical Information, U. S. Department of Commerce, Springfield, Va.

OCT 3 0 1968

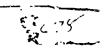
100

Julion OKL

Reproduced by the CLEARINGHOUSE for Federal Scientific & Technical Information Springfield Va 22151

DEPARTMENT OF THE ARMY Fort Detrick Frederick, Maryland

ろう



Himervin, S. H. and Kotlyarevskaya, E. N., "The Significance of non-specific sensitization in the pathogenesis of botulism," Annaly Hechnikovskogo Instituta, 1936, IV. 1. 93 - 109.

どり

M

A series of experiments was set up by the authors with the aim of clarifying the influence of the non-specific sensitization of putrescent products of putrefaction of canned food upon the occurrence of butulinus infection. Filtrates of cultures B. sporogenes, B. sycoides, B. proteus vulgaris in the quantity 0.5 cm were injected into guinea pigs. After sensitization a suspension of agar culture type A was inject in the quantity 100 million microbe bodies. All the pigs remained healthy. Seventy-three guines pigs were treated with filtrates of 4 strains of proteus vulgaris (2 toxigenic and 2 non-toxigenic). Then the pigs were infected with the microbes of botulism. Out of the animals sensitized with toxic strains of proteus, 11 died with the symptoms of botulism. Then, a group of pigs was sensitized with a filtrate of rotted chicken albumin; the filtrate proved to be toxic in the quantity 1 cm3 in 1:100 dilution. After the introduction of heated microbe bodies of B. botulinus part of the pigs died. By cross-sensitization and infection with types A and B, fatal cases with the characteristic symptoms were observed. Guina pigs sensitized by mouth were injected parenterally with 100 million, and enterally with 300 million, microbe bodies. Five cut of eight pigs disd. Twelve animals were injected in the stomach each with 4 cm of a filtrate of the toxigenic strain of proteus; after 24 hours the pigs were infected enterally with heated microbes of botulism type A; h pigs died. The authors consider that in the conditions of natural illness from botulism entering together with microbes of botulism, the toxins and products of the putrescent putrefaction of albumin heightons the sensitivity of the organism to the microbe.

B. Khotimskaya

Mimervin, S. M. and Kotlyarevskaya, E. N., "The phenomenon of reposted sensitization of small doses of botulin toxin," Annaly Hechnikovskogo Institute, 1936. IV. 1. pp. 109 - 117.

The authors set up a series of experiments with the aim of clarifying wasther the introduction of small doses of botulin toxin into the organiza will heighten its sensitivity to the subsequent introduction of the toxin. One "mouse" dose of toxin was administered to each of 33 guines pigs daily at a different time. antitoxin serum was administered to part of the pigs after h injections. All the animals died with symptoms of botulism. Those which had received anti-toxin died in the same period. Control pigs received 20 Dlm at one time and survived. Besides this, the same experiment was conducted on rabbits. The rabbits received 5 doess each, daily. The controls, 2 rabbits, received 75 doses each at one time and one rabbit 100 doses. All the animals died except the controls. Ten guinsa pigs were injected daily with 100,000 microbe bodies of heated culture of botulism Type A. After 9 injections 5 pigs died. The daily injection of botulinus microbes, as well as of the toxin, sharply heightens the animal's resistance sensitivity to subsequent injections. The authors consider that there exists some heretofore unknown action of botulinus toxin and that the nature and essence of this phenomenon requires further study.

B. Khotinskaya